5.12 HAZARDOUS MATERIALS HANDLING

This section addresses potential impacts from the handling of hazardous materials during construction and operation of the Palomar Energy Project.

5.12.1 Affected Environment

The Palomar site is located on a currently undeveloped site with existing industrial facilities adjacent to the north and east and industrial park facilities planned to the west and south. The project site will be closed to public access during both construction and operation. A key consideration for a hazardous materials analysis is the proximity of sensitive receptors, which are defined as schools, hospitals, day-care centers, emergency response facilities, and long-term health care facilities. The nearest such sensitive receptors are approximately one mile from the Palomar site (see Figure 5.12-1).

5.12.2 Environmental Impacts

5.12.2.1 Construction Phase

Hazardous materials that will be used during construction include gasoline, diesel fuel, oil, lubricants, and small quantities of solvents and paint. There are no feasible alternatives to these materials for operation of construction vehicles and equipment. No acutely hazardous materials (AHMs) will be used or stored onsite during construction.

There is minimal potential for environmental impacts from hazardous material incidents during construction. Small volumes of hazardous materials will be temporarily stored onsite inside fuel and lubrication service trucks. Paints and solvents will be stored in flammable materials cabinets. Maintenance and service personnel will be trained in handling these materials. The most likely incidents involving these hazardous materials would be associated with minor spills or drips. Impacts from such incidents will be mitigated by thoroughly cleaning up minor spills as soon as they occur.

An accident involving the release of small quantities of hazardous materials from a service truck during equipment maintenance or storage container loading is the worst-case scenario. The risk to the public (and site workers) of such an occurrence will be mitigated through the emergency response training program and procedures that will be implemented by project construction contractors and employees. In the case of a large spill of hazardous material, contaminated soil will be excavated and stored in drums or roll-off bins for offsite disposal as required by applicable regulations.

5.12.2.2 Operational Phase

Hazardous materials will be used and stored onsite during Palomar project operations. Table 2.4-5 in Section 2.0 of this document provides a list of the hazardous materials to be stored and/or used in large quantities at the site. In addition to the chemicals noted in Table 2.4-5,

Figure 5.12-1 Worst-Case Ammonia Spill Area and Sensitive Receptor Location

small quantities (less than five gallons) of paints, oils, solvent, pesticides and cleaners, typical of those purchased at a retail hardware store, also may be used at the facility.

Fuel Gas Delivery

An existing natural gas pipeline in Enterprise Street, which extends to the Palomar site boundary, will deliver natural gas to the site. A short pipeline spur connecting to the existing offsite pipeline will transport natural gas on the project site. Also, a 2,600-foot segment of existing gas pipeline in Escondido about a mile from the site will be upgraded to remove a bottleneck in SDG&E's gas pipeline system. There will be no onsite storage of natural gas at the facility.

Gas Storage

Hydrogen will be used as a generator coolant for the Palomar project. Hydrogen is a flammable gas and has an NFPA hazard rating of 4 (NFPA, 1991). A maximum of 175,000 cubic feet of compressed hydrogen (two 60,000-cubic foot trailer-mounted tanks and another 55,000 cubic feet inside generators and distribution piping), may be stored onsite at any one time. These hydrogen tanks will be located outside, in close proximity to the combustion turbine generators, away from electrical lines and other potential ignition sources, as required by applicable building and fire codes. The hydrogen tank also will be protected from vehicular impact by installation of crash posts or other protective measures. Location of the hydrogen tank as described above, coupled with operations consistent with electric power industry safety standards, present a manageable risk of explosion or fire.

Other compressed gases to be stored and used at the Palomar Energy facility may include gases typically used for maintenance activities, such as shop welding and emissions monitoring. These gases include acetylene, argon, carbon monoxide, nitric oxide, nitrogen and oxygen. The potential impacts presented by the use of these gases at the facility do not appear to be significant based on the following facts:

- Gases will be stored in small quantities at the facility (200 cubic feet per gas cylinder).
- The compressed gases will be delivered and stored in DOT-approved safety cylinders, and secured by chains to prevent tipping and physical damage.
- The compressed gases will be stored in an isolated storage area surrounded by crash posts to minimize potential for accidents or upset.
- Incompatible gases (e.g., flammable gases and oxidizers) will be stored in separate, isolated areas.

Storage of compressed gases in standard portable cylinders rather than a single larger cylinder will limit the maximum quantity released from an individual cylinder to less than 200 cubic feet in the unlikely event of a cylinder failure.

Regulated Substances

Aqueous ammonia (less than 20 percent concentration of ammonia) will be the only chemical stored in sufficient quantities at the Palomar site to be classified as a regulated substance subject to the requirements of the California Accidental Release Prevention (CalARP) Program. Aqueous ammonia will be stored in a 20,000-gallon aboveground storage tank and used for NO_x emissions control at the site. Although hydrogen gas, sulfuric acid and cyclohexylamine (neutralizing amine) also can be classified as regulated substances under certain conditions, they are not considered regulated substances for the Palomar project because they do not exceed threshold quantities. Up to 175,000 cubic feet (or 925 pounds) of hydrogen, 7,500 gallons of sulfuric acid, and 250 gallons (1,812 pounds) of cyclohexylamine will be stored at the plant site.

The CalARP Program regulations were developed by the California Office of Emergency Services (CCR Title 19, Division 2, Chapter 4.5) to merge the federal and state programs for the prevention of accidental release of regulated toxic and flammable substances. The CalARP Program is designed to streamline the permitting requirements for applicants and eliminate the need for two chemical risk management programs. The following is a summary of the federal and state regulated substances to be used at the Palomar project:

- Section 2770.5 - Tables 1 and 2 of CCR Section 2770.5 list Federal Regulated Substances and threshold quantities for accidental release prevention, including flammable substances. Hydrogen and cyclohexylamine are on the list; however, aqueous ammonia (less than 20 percent concentration) and sulfuric acid are not. The proposed maximum quantity of hydrogen (approximately 925 pounds) does not exceed the threshold quantity on the list (10,000 pounds). The proposed quantity of cyclohexylamine (1,812 pounds) does not exceed the threshold value of 15,000 pounds. Therefore, neither hydrogen nor cyclohexylamine are considered Federal Regulated Substances.
- Section 2770.5 - Table 3 of Section CCR 2770.5 lists State Regulated Substances and threshold quantities for accidental release prevention. Aqueous ammonia, sulfuric acid and cyclohexylamine are included on this list. The maximum quantity of aqueous ammonia proposed for the Palomar facility (20,000 gallons or approximately 31,000 pounds as ammonia) exceeds the threshold quantity on the list (500 pounds); therefore, aqueous ammonia is considered a State Regulated Substance for which a State Risk Management Plan (RMP) is required. Based on the proposed use and storage of sulfuric acid and the proposed quantity of cyclohexylamine, they are not considered State Regulated Substances. Sulfuric acid is a state Regulated Substance only if: 1) it is concentrated with greater than 100 pounds of sulfuric trioxide; 2) the acid meets the definition of oleum; or 3) the sulfuric acid is in a container with flammable hydrocarbons. Cyclohexylamine is a State Regulated Substance only if the proposed maximum quantity exceeds the threshold value of 10,000 pounds.

SCR systems (including aqueous ammonia injection) will be used to control NO_X emissions in the stack exhaust. Monitoring equipment will include sensors to control injection rates. The aqueous ammonia storage and handling facilities will be equipped with continuous tank level monitors, temperature and pressure monitors and alarms, excess flow and emergency island valves, and a steel-reinforced concrete containment structure surrounding the tank and piping. Only trained technicians will conduct system maintenance and repairs.

Aqueous ammonia will be stored onsite in a 20,000-gallon tank. As with bulk storage of other hazardous materials, the ammonia storage tank will be surrounded by spill containment walls to hold the entire capacity of the tank plus an additional volume to contain a 25-year, 24-hour rainfall event. For this analysis, 10 percent excess capacity is used to approximate a 25-year, 24-hour rainfall event in the project area. Any spilled ammonia in the storage tank berm area will be collected and drained to a covered collection sump. An ammonia vapor detection system will be installed to allow rapid detection and quick response to any accidental spill of ammonia.

The aqueous ammonia typically will be delivered to the facility in 6,100-gallon tank trucks. Tank trucks will be unloaded in a tank truck unloading area paved with concrete and surrounded by a berm. The unloading area and storage tank bermed area will be connected to a collection sump by a concrete-lined trench with sufficient capacity to contain the entire contents of the tanker truck. The trench will have approximately 12 square feet of metal grate opening to allow for collection of any ammonia that may spill during an unloading accident.

5.12.3 Risk Management Plan Components

According to CCR Title 19, Division 2, Chapter 4.5, the owner or operator of a facility that handles more than a threshold quantity of a Regulated Substance, shall submit an RMP that reflects all covered processes. The CalARP Program defines three program levels for a RMP, depending on the complexity, accident history and potential impact of releases of regulated substances. For this project, the Palomar project will prepare an RMP that will include an ammonia hazard analysis, an offsite consequences analysis, a seismic assessment, emergency response plan, and training procedures.

5.12.3.1 Ammonia Release Scenarios

Aqueous ammonia is a regulated substance and has the potential for offsite risk if accidentally released. Risk has two components - frequency and severity. The more often a particular mishap is likely to occur and the more hazardous the material involved in the mishap, the higher the risk. Risk can be reduced by reducing either the frequency of occurrence, the severity of the release, or both in combination.

NO_x emissions control can be accomplished using either anhydrous ammonia (an undiluted almost pure form of ammonia) or aqueous ammonia (a water solution of lower concentration). In order to have the same amount of ammonia available for use in NO_x control, aqueous ammonia requires more tanker truck shipments than anhydrous ammonia because of its lower concentration. Aqueous ammonia was selected over anhydrous ammonia for the Palomar project in order to reduce the severity of any potential ammonia accident. Anhydrous ammonia will boil at -28.3°F at atmospheric pressure, while the evolution of ammonia from a water solution occurs at a much lower rate than boiling anhydrous ammonia.

The selection of the less hazardous form of ammonia (aqueous rather than anhydrous) serves as a major means for mitigating potential hazards of an accidental spill. Since it is of much lower concentration, a potential aqueous spill would have a much lower impact than an equivalent size anhydrous spill. Also, since it is much more difficult to release ammonia gas from an aqueous spill than from a spill of anhydrous ammonia, the rate of ammonia released from an aqueous spill is much lower, which also reduces the potential offsite impact.

The proposed 19.5 percent aqueous concentration is well below the OSHA 44-percent concentration that triggers Process Safety Management (PSM) requirements. The federal RMP is triggered by the storage of aqueous ammonia in a solution of more than 20 percent concentration, and thus the Palomar system is not subject to the Federal RMP. The CalARP is triggered when the ammonia in the aqueous solution exceeds 500 pounds. The projected 20,000 gallons of aqueous ammonia at the 19.5 percent concentration would contain approximately 31,000 pounds of ammonia. Thus, the project is subject to CalARP requirements.

The following aqueous ammonia release scenario was evaluated: complete release of an aqueous ammonia tanker truck (6,100 gallons) into a concrete-lined covered sump located in the truck unloading area. The risk of catastrophic failure of an ammonia storage tank is considered extremely remote (less than one-in-one million), and thus, not to represent a significant risk (CEC, 1999). Thus, an ammonia tank failure scenario was not evaluated.

The CEC has defined four bench mark exposure levels for ammonia: 1) lethal (2,000 ppm), 2) immediately dangerous to human health (500 ppm), 3) the RMP endpoint required by EPA and California (200 ppm), and 4) a level considered to be without serious adverse impacts on the public (75 ppm). A significant impact is defined as an offsite concentration over 75 ppm.

Ammonia Tanker Unloading Spill

The potential impact of a catastrophic release of aqueous ammonia from a delivery vehicle accident was modeled using the RMP*Comp and SCREEN3 models. RMP*Comp only estimates the distance at which the concentration of the spilled material falls below the Emergency Response Planning Guideline Level 2 (ERPG-2) concentration level. SCREEN3 allows estimates of ammonia concentrations as a function of downwind distance.

The truck capacity was assumed to be 6,100 gallons (maximum truck size typically used by ammonia suppliers). The ammonia release rate was assumed to be the normal transfer rate of 400 pounds per minute lasting for 10 minutes. The spill is assumed to continue for 10 minutes before the truck operator or project personnel are able to activate the transport trailer remote emergency shut-off valve. Assuming a hose rupture with a diameter of four inches, the emission rate would be approximately 400 pounds per minute. A wind speed of 1.5 m/sec and F stability was used for modeling. For a delivery truck traveling from a non-desert area and taking into consideration the convective heat transfer from the tanker as it travels at highway speeds, the bulk temperature should be typical of the originating location (July bulk temperatures for Los Angeles, with no convective heat losses, typically would be 69°F and for San Diego about 71°F). To be conservative for purpose of this analysis, the tanker bulk temperature was assumed to be 77°F.

For the worst-case tanker truck spill scenario, it was assumed that the entire contents of the truck would be spilled in the truck unloading area. The unloading area is assumed to be sloped and diked, with a covered collection sump to contain the complete contents of the truck. Only the grate openings to the sump (approximately 12 feet square) would be exposed to the atmosphere. For this spill scenario, the modeled maximum impact at the property line (35 meters or 115 feet) is approximately 60 ppm. No concentrations above the significance threshold of 75 ppm extend offsite.

A truck unloading accident where the entire truckload of 6,100 gallons of ammonia is spilled also is a highly unlikely scenario. Leaks of ammonia from a bad connection or damaged hose would be very noticeable and quickly corrected. Should the connection suddenly break, the operator would be able to activate the emergency shut-off valve, hence substantially limiting the amount of spillage. Therefore, should an accident occur, it is likely that less than the entire load would be spilled before the problem is brought under control. Table 5.12-1 shows the RMP*Comp and SCREEN3 results for the aqueous ammonia release scenario.

As shown in Table 5.12-1, for the worst-case tanker truck unloading accident, the 75 ppm significance level does not extend offsite. The maximum concentration at the site boundary is 60 ppm, 20 percent below the significance threshold. As shown on Figure 5.12-1, the closest sensitive receptors are the Del Dios Middle School located approximately one mile southeast of the project site, and the Little County Preschool located approximately one mile south-southeast of the site. The nearest residences are approximately 1,800 feet west of the site.

Table 5.12-1 Worst-Case Aqueous Ammonia Accident Release Scenario SCREEN3 Modeling Results

Concentration Level (ppm)	Tanker Truck Unloading Accident - Distance to Significance Level in Meters (Feet)
2,000	(Level does not occur offsite)

500	(Level does not occur offsite)
200	(Level does not occur offsite)
75	(Level does not occur offsite)
60	(Maximum level at site boundary; 20 percent below Significance Threshold)

Natural Gas Pipeline Rupture

Natural gas, which will be used as a fuel for the facility, poses a fire and/or explosion risk as a result of its flammability. While natural gas will be used in significant quantities, it will not be stored onsite. The risk of a fire and/or explosion is not considered to be a significant risk by the CEC staff. The potential risk of a natural gas pipeline rupture will be reduced to insignificant levels through adherence to applicable codes and the development and implementation of effective safety management practices.

Other Large Quantity Hazardous Materials

Storage of large quantities of both sulfuric acid and sodium hydroxide (7,500 gallons each) will require special precautions, due to their highly corrosive nature. Each of the chemicals will be stored in a lined, carbon steel tank to minimize the potential for catastrophic failure of the tank. A spill containment structure surrounding each storage tank will also be provided in order to contain small spills and leaks that may occur (see General Operating Practices below). The spill containment area will be lined with a corrosive-resistant coating.

Other large quantity hazardous materials (over 1,000 gallons) used at the facility that could be released in an accident include sodium hypochlorite and scale inhibitors. Most of these materials have low acute toxicity. Human health impacts can be minimized by prompt cleanup of any accidental spills if they occur.

A summary of relative toxicity and human exposure limits for the large quantity hazardous materials handled at the site is provided in Table 5.12-2.

Table 5.12-2 Summary of Special Handling Precautions for Hazardous Materials

Hazardous Material	Relative Toxicity/ Hazard	Exposure Limit	Storage Container/Size	Special Handling Precautions
Aqueous Ammonia	High Respiratory hazard	25 ppm (NIOSH)	Carbon steel tank 20,000 gallons	Risk Management Plan, spill containment dikes, ammonia detectors and alarms,
Hydrogen Gas	Low Flammable gas	None Established	Carbon steel tank 60,000 cubic ft under pressure	Pressure safety tank, crash posts, safety valves
Natural Gas (methane)	Low Flammable gas	None Established	Pressurize carbon steel pipeline	Pressure safety relief valves
Boiler Water	Moderate	None	Plastic tank	Spill and secondary

Treatment Chemicals (various)		Established	Maximum 4,000 gallons	containment area
Sodium Hydroxide	High Highly corrosive	2 mg/m^3 OSHA	Lined, carbon steel tank 7,500 gallons	Isolated from incompatible chemicals, lined tank, and lined spill containment and tank secondary containment area
Sodium Hypochlorite	Moderate Corrosive and irritant	None Established	Plastic tank 2,500 gallons	Spill and tank secondary containment area
Sulfuric Acid	High Highly corrosive	1 mg/m^3 OSHA	Lined, carbon steel tank 7,500 gallons	Isolated from incompatible chemicals, lined tank, and lined spill and tank secondary containment area
Cyclohexyl-amine	High Irritant	10 ppm (OSHA PEL)	Plastic tank 250 gallons	Spill and tank secondary containment area

General Operating Practices

Chemicals will be stored in chemical storage vessels and tanks specifically designed for their individual characteristics. Large quantity (bulk) chemicals will be stored outdoors in aboveground storage tanks manufactured of carbon steel. Spill containment curbs or dikes to contain the chemicals in the event of leaks or spills will be constructed around each of the major hazardous chemical storage areas. Bulk storage tanks containing ammonia, sulfuric acid, sodium hydroxide, sodium hypochlorite, and the various boiler treatment chemicals, each will have secondary containment dikes capable of holding the tank volume plus additional capacity to allow for precipitation.

Boiler water treatment chemicals include the following four chemicals: organic phosphate inhibitor (4,000 gallons); disodium and trisodium phosphate (1,000 gallons); neutralizing amine (250 gallons); and oxygen scavenger (250 gallons). Corrosive materials, such as acid and caustic, will be stored in isolated containment areas. A summary of the special handling requirements for the large quantity hazardous materials stored at the site is provided in Table 5.12-2. All hazardous materials storage vessels will be designed in conformance with the applicable ASME codes. A Hazardous Materials Business Plan, in compliance with the Federal Emergency Planning and Community Right-to-Know Act (1986), will be prepared and submitted to the City of Escondido Fire Department for approval.

Small quantity chemicals will be stored in their original delivery containers in order to minimize risk of upset. Personal protection equipment (PPE) will be provided. Personnel working with chemicals will be trained in proper handling technique and in emergency response procedures to chemical spills or accidental releases.

Appropriate safety programs will be developed addressing hazardous materials storage locations, emergency response procedures, employee training requirements, hazard recognition, fire safety, first-aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communications training, personal protective equipment training and release reporting requirements. These programs include a chemical Risk Management Plan for Aqueous ammonia in accordance with the CalARP emergency regulations, Hazardous Materials Business Plan, workers safety program, fire response program, plant safety program and facility standard operating procedures.

5.12.4 Mitigation Measures

This section describes the Applicant-proposed mitigation measures that will be implemented to reduce project impacts resulting from hazardous materials handling.

5.12.4.1 Construction Phase

HM-1. During construction, hazardous materials stored onsite will be limited to small quantities of paint, coatings and adhesive materials, and emergency refueling containers. These materials will be stored in their original containers inside a flammable materials cabinet. Fuels, lubricants, and various other liquids needed for operation of construction equipment will be transported to the construction site on an as-needed basis by equipment service trucks.

HM-2. An onsite safety officer will be designated to implement health and safety guidelines and, if necessary, contact emergency response personnel and local hospitals. Material Safety Data Sheets (MSDS) for each onsite chemical will be maintained. Employees will be made aware of the chemicals and the location of MSDS sheets.

HM-3. Project construction contractors will be required to develop standard operating procedures for servicing and fueling construction equipment. These procedures will, at a minimum, include the following:

- No smoking, open flames, or welding will be allowed in fueling/service areas.
- Servicing and fueling of vehicles and equipment will occur only in designated areas. These areas will be bermed, covered with concrete, or fashioned in some other manner to control potential spills.
- Fueling, service and maintenance will be conducted only by authorized, trained personnel.
- Refueling will be conducted only with approved pumps, hoses, and nozzles.
- All disconnected hoses will be handled in a manner to prevent residual fuel and liquids from being released into the environment.

- Drip pans will be placed under equipment to collect small drips and minimize potential spills during servicing.
- Service trucks will be equipped with fire extinguishers, personal protective equipment, and spill containment equipment, such as absorbents.
- Service trucks will not remain on the job site after fueling and service are complete.
- Spills that occur during vehicle maintenance will be cleaned up immediately and contaminated soil will be containerized and managed as a hazardous waste, if appropriate. A log of spills and clean-up actions will be maintained.
- Emergency phone numbers will be available onsite.
- All containers used to store hazardous materials will be properly labeled and kept in good condition.

It is anticipated that adherence to these standard operating procedures will minimize the potential for incidents and lessen the impact of spills involving hazardous materials during construction.

5.12.4.2 Operational Phase

HM-4. Concrete spill containment berms or dikes will be constructed surrounding each of the bulk chemical storage tanks, including aqueous ammonia, sulfuric acid, sodium hydroxide, sodium hypochlorite, and scale inhibitors. The secondary containment dikes surrounding each tank will be designed to contain the tank volume plus additional volume to contain a 25-year, 24-hour rainfall event to account for precipitation; 10 percent excess capacity can be used to approximate such a rainfall event in the project vicinity. Sumps will be provided within the diked area in order to easily remove collected rainwater and spilled chemicals.

HM-5. Ammonia tank trucks will be unloaded in a tank truck unloading area paved with concrete and with sufficient berm to provide secondary containment for the entire contents of the tank truck plus 10 percent to account for precipitation. Drainage from the delivery pad berm will be directed to a covered concrete trench constructed next to the ammonia storage tank.

HM-6. A fire protection system will be included to detect, alarm, and suppress a fire, in accordance with the applicable laws, ordinances, regulations, and standards (LORS).

HM-7. Construction of the aqueous ammonia storage system will be in accordance with applicable LORS. The aqueous ammonia storage and handling facility will be equipped with the following safety features:

- Carbon steel tank equipped with continuous tank level monitors, temperature gage, and pressure monitor. Safety alarms will also be provided on each monitoring system.
- Pressure relief valves and excess flow control valves on tank and fill connections.

HM-8. A Risk Management Plan (RMP) for handling ammonia at the facility will be prepared before the initial filling of the ammonia tank with product. The RMP will include an ammonia hazard analysis, offsite consequence analysis, seismic assessment, emergency response plan, and training procedures. The RMP process will identify and propose adequate mitigation measures to reduce the risk to the lowest possible level.

HM-9. Hazardous materials will be stored and handled in accordance with all local, state and federal regulations and codes. A safety program will be implemented including safety training programs for contractors and operations personnel, respectively. A Hazardous Materials Business Plan will be prepared for approval by the City of Escondido Fire Department.

HM-10. All areas subject to potential leaks of hazardous materials will be paved and bermed. Incompatible materials will be stored in separate containment areas.

5.12.4.3 Monitoring

Because environmental impacts caused by hazardous materials usage during construction and operation of the facility are expected to be minimal, an extensive monitoring program is not required.

HM-11. Visual monitoring during construction and operation will be performed to determine compliance with and the effectiveness of the proposed mitigation measures. Written records of all monitoring events will be kept, including observations, actions taken, persons involved, and any recommendations.

5.12.5 Significant Unavoidable Adverse Impacts

With implementation of the Applicant-proposed mitigation measures, no significant unavoidable adverse impacts are anticipated from the proposed project.

5.12.6 Cumulative Impacts

Section 5.18 identifies two small (<50 MW) gas fired turbine power plant projects under development in Escondido near the Palomar site: 1) the CalPeak facility which is planned adjacent to the northeast of the proposed project site, and 2) the RAMCO facility, which is under construction about 0.5 mile north. Both of these projects are expected to be in operation before the beginning of Palomar project construction.

Construction activities in other areas of the planned ERTC industrial park within which the Palomar project site is located are expected to overlap with Palomar construction.

Hazardous materials handling programs will be developed and implemented independently for the Palomar project and the three other projects considered for potential cumulative impacts. Construction and operation activities and procedures will not cause or contribute to significant cumulative impacts with respect to hazardous materials handling.

5.12.7 LORS Compliance

Design, construction and operation of the Palomar project will be conducted in accordance with all LORS pertinent to hazardous materials handling. The applicable LORS are discussed in Section 6.4.12.

5.12.8 Involved Agencies and Agency Contacts

Agencies responsible for hazardous materials handling and agency contacts are provided in Table 5.12-3.

Table 5.12-3 Involved Agencies and Agency Contacts

Agency/Address	Contact/Telephone	Permits/Reason for Involvement
San Diego County Environmental Health Services Department 1255 Imperial Avenue San Diego 92113	Veronica Garmo 619-338-2232	Certified Unified Permitting Authority (CUPA) for Hazardous Materials Inventory and Emergency Business Plan.
City of Escondido Fire Department 201 N Broadway, Escondido 92205	Lamont Landis 760-839-5414	Risk Management Plan for Ammonia.

5.12.9 Permits Required and Permit Schedule

Agency-required permits related to hazardous materials handling are summarized below in Table 5.12-4.

Table 5.12-4 Permits Required and Permit Schedule

Permit/Approval Required	Schedule
Hazardous Materials Inventory and Emergency Business Plan	30 days prior to start of operations.
California Accidental Release Prevention Program (Risk Management Plan)	90 days prior to start of operations.

5.12.10 References

American Institute of Governmental Industrial Hygienists. 1997. Chemical Hazard Handbook.

California Office of Emergency Services. 1998. Risk Management Plans. (www: oes.ca.gov.)

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NFPA. 1991. Fire Protection Guide on Hazardous Materials. Tenth Edition. Quincy, MA.

Uniform Fire Code. 1997. Prepared by the International Fire Code Institute. March 1997.

U.S. Environmental Protection Agency (EPA). 1995. SCREEN3 Model User's Guide, EPA-454/B-95-004.

U.S. Environmental Protection Agency (EPA) 1999. Risk Management Program Guidance for Offsite Consequence Analysis, EPA 550-B-99-009. April 1999.